

Drinking Motives, Hazardous Alcohol Consumption and Self-Perceived Stress across  
Academic Years

Naomi Kiss

18438344

Supervisor: Dr. Fearghal O'Brien

BA (Hons) Psychology  
Submitted to the National College of Ireland,  
March 2022

## Submission of Thesis and Dissertation

National College of Ireland  
Research Students Declaration Form  
(Thesis/Author Declaration Form)

Name: Naomi Kiss

Student Number: 18438344

Degree for which thesis is submitted: BA (Hons) Psychology

Title of Thesis: Drinking Motives Amongst Different Stages of College

Date: 21<sup>st</sup> of March, 2022

### Material submitted for award

A. I declare that this work submitted has been composed by myself.

B. I declare that all verbatim extracts contained in the thesis have been distinguished by quotation marks and the sources of information specifically acknowledged.

C. I agree to my thesis being deposited in the NCI Library online open access repository NORMA.

D. *Either* \*I declare that no material contained in the thesis has been used in any other submission for an academic award.  
*Or* \*I declare that the following material contained in the thesis formed part of a submission for the award of

I declare that the following material contained in the thesis formed part of a submission for the award of QQI BA (Honours) Degree in Psychology at level 8  
(State the award and the awarding body and list the material below)

**Submission of Thesis to Norma Smurfit Library, National College of Ireland**

Student name: Naomi Kiss

Student number: 18438344

School: School of Business Course: Bachelor of Arts Honours Psychology

Degree to be awarded: QQI BA (Honours) Degree in Psychology at level 8

Title of Thesis: Drinking Motives, Hazardous Alcohol Consumption and Self-Perceived Stress across Academic Years

One hard bound copy of your thesis will be lodged in the Norma Smurfit Library and will be available for consultation. The electronic copy will be accessible in TRAP (<http://trap.ncirl.ie/>), the National College of Ireland's Institutional Repository. In accordance with normal academic library practice all theses lodged in the National College of Ireland Institutional Repository (TRAP) are made available on open access. I agree to a hard bound copy of my thesis being available for consultation in the library. I also agree to an electronic copy of my thesis being made publicly available on the National College of Ireland's Institutional Repository TRAP.

Signature of Candidate:



For completion by the School:

The aforementioned thesis was received by \_\_\_\_\_ Date: \_\_\_\_\_

This signed form must be appended to all hard bound and electronic copies of your thesis submitted to your school

### **Acknowledgements**

I have been surrounded by a circle of supportive people who have helped me throughout this undergraduate degree. I would like to sincerely thank my supervisor Dr. Fearghal O'Brien whose guidance, patience and understanding demeanour has helped me immensely throughout the writing of this thesis and for always answering my many questions.

I am grateful for my family and friends who patiently asked me how my thesis was moving forward, and for encouraging me throughout this journey. Mom and Dad, I would like to offer a heartfelt thank you for always supporting me in any challenges that I take on. Gianni, Julia, Erin and Ash, I want to thank you for your constant support, love and faith in me. You have given me the strength to continue through the tough times and I want to thank you for being there for me when I needed some motivation

Finally, I would like to give my special thanks to all my participants who made this project possible. I appreciate you all for kindly taking the time out of your own lives to partake in my project. Your participation is what helped bring my thesis to life.

### Abstract

**Aim:** To examine the relationships between students' drinking motives, self-perceived stress and alcohol consumption; studied in the context of risk of alcohol dependence and alcohol abuse across differing academic years in tertiary education. **Methods:** The sample included 89 students. Students completed a Microsoft forms questionnaire, including Alcohol Use Dependency Identification Test (AUDIT), Drinking Motives Questionnaire-Revised (DMQR) Perceived-Stress Scale (PSS), as well as a self-designed questionnaire to collect demographic data. **Results:** Risky or harmful alcohol use was found in 79.8% of students in the past month. Coping motives had the strongest relationship to stress out of the other drinking motives. Different drinking motives were not evident across different groups of first, in-between and final year students. **Conclusion:** Lack of differences in drinking motives between college years may indicate that the groups analysed used alcohol as a coping strategy rather than any other motives. It is critical to develop an environment for students that promotes healthy stress coping mechanisms and early intervention.

*Keywords:* drinking motives, stress, heavy-episodic drinking, alcohol use, college students, drinking to cope

## Table of Contents

Introduction.....	7
Motivational Model for Alcohol Use .....	9
Drinking Motives.....	11
Self-Perceived Stress.....	13
The Present Study.....	15
Methods.....	17
Participants.....	17
Measures.....	17
Demographics.....	17
The Alcohol Use Disorders Identification Test – Concise.....	18
Perceived Stress Scale.....	18
Drinking Motives Questionnaire-Revised.....	19
Design and analysis.....	19
Procedure.....	20
Results.....	21
Descriptive statistics.....	21
Inferential statistics.....	23
Discussion.....	25
Practical Implications.....	27
Strengths and Limitations.....	28
Conclusion.....	30
References.....	31
Appendices.....	43

## Introduction

University is a period that involves important personal and intellectual development. Additionally, it's a stage where students consume large quantities of alcohol (Carter et al., 2010). Since a significant number of young adults enrol in university programs, university can be an essential venue for both the prevention and intervention of future drinking issues, such as dependency or hazardous alcohol use, throughout an individual's life (Kilmer, Cronce, & Larimer 2014).

As mentioned, alcohol persists to significantly be the most consumed and abused substance amongst college students (Schilling et al., 2017) despite the fact that trends are indicating a decline in alcohol consumption (Jackson et al., 2017). Research acquired from several countries suggests that students exposed to a campus environment tend to drink more than their non-college peers (Dawson, Grant, Stinson, & Chou 2004; Kypri, Cronin, & Wright, 2005; Kypri, Langley, McGee, Saunders, & Williams, 2002; White & Hingson, 2013). A national survey conducted in 2019 investigated full-time college students aged between 18 to 22. Findings approximated that 53 percent of students consumed alcohol in that month of investigation, whilst 33 percent of students drank excessively. Excessive drinking is traditionally termed as binge-drinking (Center for Behavioral Statistics and Quality, 2019), or an interchangeable term of 'heavy episodic drinking', which implies drinking more than six units of alcohol for females and eight for males in a single session (Herring, Berridge, & Thom, 2008).

Heavy episodic drinking (HED) is linked to various negative and harmful outcomes, namely, suicide attempts, physical and sexual assaults, accidental pregnancies, sexually transmitted diseases, poor attendance resulting in academic difficulties and a heightened possibility of death (White & Hingson, 2013; Windle, & Windle, 1996; Presley, Meilman, & Leichliter, 2002). These adverse consequences may increase the likelihood that negative

emotional, social, and health may eventualize (O'Hare, 2001; Scott et al., 2011) Therefore, in an attempt to limit and hinder excessive alcohol consumption and their health-related problems an understanding of the etiology and antecedents of drinking behaviour is vital. Substantial research on the etiology of college students' drinking behaviours has discovered that there is indeed a relationship between social and psychological aspects of alcohol use and misuse ( Baer & Carney, 1993; Fromme & Ruela, 1994; Wechsler, Dowdall, Davenport, & Castillo, 1995). Emphasis is placed on the role that specific motives have on the consumption of alcohol amongst students (Carey & Correia, 1997; Karwacki & Bradley, 1996; MacLean & Lecci, 2000; Stewart & Zeitlin, 1995). These specific motives are called 'Drinking Motives'(Read, Wood, Kahler, Maddock, & Palfai, 2003) and are defined by an individual's choice to consume alcohol with the aim of obtaining a desired outcome (Cooper, 1994; Cox & Klinger, 1988) .

There's limited amount of research conducted analysing drinking motives and drinking behaviour changes across stages in undergraduate courses. Bewick et al. (2008), mentions this in his review that future research should aim to investigate HED changes across the academic years. Another statement made is that in comparison with studies completed in North America, fewer studies have been conducted in detail in Europe and the UK regarding drinking patterns of students (Kypri, Langley, McGee, Saunders, & Williams, 2002). Knowing that the minimum purchase age of alcohol in the US is 21 years, whilst European students can legally purchase alcohol from the age of 18, this creates a different context for alcohol consumption, as it may provide a different context for drinking patterns (Bewick et al., 2008) The aim of this study then is to address a gap in research by attempting to determine students' drinking behaviours regarding drinking motives, alcohol consumption rates and an analysis of whether self-perceived stress may detail drinking patterns in differing



academic years, as it has shown to impact alcohol consumption levels (Betancourt et al., 2013).

### **Motivational Model for Alcohol Use**

Research demonstrates the importance that motivational factors have on the individuals reasons for partaking in a behaviour as both the initiation and perpetuation plays an important role in that behaviour (Carey & Correia, 1997; Kassel, Jackson, & Unrod, 2000; Ratliff & Burkhart, 1984). Therefore, drinking motives can be analysed by the use of motivational models for alcohol use, that relies on subjective experiences, environments and expectancies (Carpenter & Hasin, 1998b, ; Cox & Klinger, 1988). These expectancies are the individuals' beliefs regarding the consequences of alcohol use or the positive or negative effects that alcohol may have on their social, emotional and cognition (Engels, Wiers, Lemmers, & Overbeek, 2005; Handley & Chassin, 2009)

Drinking Motives were classified using three parts of a four-factor model established by Cox and Klinger (1988). This model, known as The Motivational Model of Alcohol Use, described Drinking Motives by defining the factor that an individual will choose to drink is based on a particular motive or reason being met or present. Cox & Klinger's' (1988) Model considers the individuals decision about alcohol consumption being an amalgam of emotional and rational processes that the individual expects a change to occur by drinking alcohol compared to not drinking. This change may be the chemical effects of alcohol, for example positive mood change or feeling more relaxed, or indirect effects, for instance, being liked by peers. The decision to drink may be an automatic and unconscious process, therefore the individual may not even realise the deciding factors of their choice to drink (Cox & Klinger, 1988, Cox & Klinger, 1990). The Motivational Model of Alcohol Use, explains the choices to

partake in drinking is based around historical and current factors, expected effects and drinking motives.

Antecedents of individuals expectancies comprise of four components, including Historical, current, situational, and cognitive factors. The historical factors are the genetic predispositions of reacting positively or negatively to alcohol, such as personality characteristics, socio-cultural and environmental factors. Personality characteristics can include the following, non-conformity, impulsivity, extraversion or sensation seeking, all of which are traits that have been linked to alcohol misuse (Castellanos-Ryan, O'Leary, Barrett, Sully, & Conrod, 2013). In some cultures, there are specific drinking styles and patterns, for example findings have uncovered that sociocultural contexts massively impact drinking cultures, by how alcohol is perceived and how alcohol-related policy and practice is managed (Gordon, Heim, & MacAskill, 2012). The current factors relate to the quality of life whilst situational factors are the availability of alcohol or being exposed to peers who drink (Kuntsche, Knibbe, Gmel, & Engels, 2005). Cognitive factors are the thought processes surrounding alcohol or the memories partaking in the behaviour that drinking brings up. These stated four antecedents are the foundations for an individual's expectancies for chemical and non-chemical effects. The results of the valence of the expected effects can be positive or negative. Valence is the emotional value that is associated with a stimulus (Delplanque, Silvert, Hot, Rigoulot, & Sequeira, 2006). Positive affect is the enhancement of positive moods whilst negative affect reduces moods, such as to avoid stressful situations etc.

Cox & Klingers (1988) motivational model furthermore branches out to the origin of the expected effects, that can either be internal or external. Internal relates to the persons change in their moods, feelings, and attitudes meanwhile external relates to the persons social environment. Consequently, four final classifications of drinking behaviours spread out to

Enhancement, Social, Coping and Conformity. Enhancement has positive internal affects as drinking for enhancement reasons is used to obtain inner positive moods. Social drinking motives has positive external affects as drinking socially, makes individuals feel positive moods in an external setting, i.e. an environment. Drinking to reduce pessimistic or undesirable affects is Coping, which is a negative-internal valence as emotions occur within ones' private thoughts or feelings and since drinking for coping reasons is a negative affect as its undesirable. Conformity is a negative, external affect due to the consumption of alcohol being used to avoid peer rejection and/ or peers may peer pressure the individual to drink. Since this sort of drinking motive happens in an external setting like an environment and leads to upsetting moods, feelings and thoughts, it is then therefore, a negative-external affect (Kuntsche, et al., 2005).

### **Drinking Motives**

Research suggests that social and enhancement motives are chosen by students more frequently than coping and conformity motives (Cooper et al., 2015; Crutzen, Kuntsche, & Schelleman-Offermans, 2013; Kuntsche et al., 2005) This is partly due to adolescents stating that consuming alcohol makes partying more of an enjoyable experience (Jerez & Coviello, 1998). Some studies noticed that consuming alcohol due to social motives correlates to heavy-episodic drinking (HED), therefore an increased chance of alcohol-related problems can occur (Van Damme, Maes, Clays, Rosiers, Van Hal, & Hublet, 2013). Other researchers have expressed that social drinkers are disinclined to experience alcohol-related problems, as they mainly drink in social environments, once or twice a week, therefore the risk of alcohol dependency is limited (Cooper, 1994, Simons et al., 2000, Stewart et al., 2001, Windle, 1996). Furthermore, social and coping motives have been found to cause problems with law

enforcement as students scored high on social complications, which include destruction of property, damage to relationships and trouble with authorities (Bradley et al., 1992, Karwacki & Bradley, 1996). When students finish high school and move on to college, they may self-select into groups that participate in HED and may also be more susceptible to peer pressure in order to fit in with HED groups (LaBrie et al., 2007). Social motivations have been stated to contribute to risk, as individuals that are more socially motivated tend to want to build a 'social camaraderie' by using alcohol to their advantage (LaBrie et al., 2007).

As stated above higher enhancement motives can forecast risky drinking behaviour as social motives do (Cooper et al., 2015; Kuntsche et al., 2005; Schelleman-Offermans, Kuntsche, & Knibbe, 2011) Research shows that enhancement and social reasons have the highest positive association to HED (Cooper et al., 2015). Patrick and Schulenberg (2011) noticed that individuals that had HED reported drinking due to 'boredom' or 'to get high' across early 18 to 22-year-olds (Kairouz et al., 2002).

Conformity Motives showed mixed results, one study proposed an increase in conformity levels leads to an increase in Alcohol Consumption (Merrill & Read, 2010), albeit another study found the opposite relationship to be true (Crutzen et al., 2013; Kuntsche & Cooper, 2010; Kuntsche et al., 2005)

Findings for the fourth drinking motive, coping, ties in with perceived stress levels (Abbey, Smith, & Scott, 1993). Cooper (2015) states that coping motives predict alcohol related problems in the future of the individual, this problem is associated with alcohol dependence in adulthood (Carpenter & Hasin, 1998a, Carpenter & Hasin, 1998b, Carpenter & Hasin, 1999). Drinking to alleviate negative affects did not show any associations between HED (McCabe, 2002), but research found that drinking for coping reasons may alleviate problems at the current moment but since the root or core of the problems does not get

addressed, it could lead to long-term consequences (Cooper et al., 1995, Kassel et al., 2000). Both Social and Coping motives share similar results relating to poor academic achievement (Bradley et al., 1991). Beginning a new life experience especially as an emerging adolescence, the first year of college can cause the adolescent to have feelings of maladjustment and this may lead to unhealthy coping strategies such as drinking alcohol. (Paul & Brier, 2001; Sevinc & Gizir, 2014). First Year students feel the need to excel in a couple of domains, some of which include, academic, social and personal domains. If they feel as though they have not excelled within these domains, feelings such as poor sense of belonging may envelop. Adolescence that are predisposed to ineffective coping styles may partake in HED to comfort and soothe their negative outlook (Sevinc & Gizir, 2014).

### **Drinking Motives and Self-Perceived Stress**

As mentioned above the consumption of alcohol is used extensively in the student populations and has repeatedly showed up in multiple studies as having an associations with stress (Cooper, Frone, Russell, & Mudar, 1995; Cooper, Krull, Bede-Agocha, Flanagan, Orcutt, Grabe, & Dermen, 2008; Dehart et al., 2009; Goldsmith, Tran, Smith, & Howe, 2009) Lyvers and colleagues (2010) suggest that students perhaps use alcohol as a coping mechanism to deal with stress. Abbey et al. (1993) showed that regarding daily coping, students reportedly consumed higher amounts of alcohol on days that they perceived to be reasonably more stressful. Contrary to these findings, Park and colleagues' (2004) research pointed that the impact of stress on alcohol consumption could not be proved by coping and affect. The study inferred that "daily stress coping-drinking process" is complex and has many different aspects which could include either positive and negative affective pathways that are interconnected to daily alcohol use.

Wicki et al. (2010) conducted a meta-analysis gathering data from European countries and had identified that limited number of studies had sampled students from a variety of academic years. These studies mainly examined differences in the prevalence and quantity of alcohol consumption or HED. The results showed fluctuations in alcohol consumption over academic years from study to study. A few studies showed a decline in the prevalence and consumption (Dumitrescu, 2007; Bewick et al., 2009, Granville-Chapman et al., 2001), others displayed a rise in middle academic years (Engs et al., 1991), whilst further studies showed no change (DiGrande et al., 2000; Tyssen et al., 1998; Bullock, 2004; Underwood & Fox, 2000).

Granville-Chapman and colleagues, (2001) noticed that most final year medical students opted against drinking as they didn't want it to interfere with academic studies and wanted to excel academically. Whilst Dumitrescu (2007) collectively looked at the relationship between both alcohol and tobacco consumption and found that greater proportion of sixth year dental students collectively drank and smoked compared to medical graduating students. Bewick et al., (2009) found that in both longitudinal and cross-sectional samples, there was a considerable decline in the amount of units of alcohol consumed each week across a three-year undergraduate time period. The alcohol consumption of UK students was highest in their first year, mean age of 19 years and in Year 3, a third of students continued to drink beyond the advised limit (Bewick et al., 2009).

### **The Current Study**

Ambiguity still surrounds the question of how or whether alcohol consumption patterns alter throughout the course of a student's academic life (Bewick et al., 2008). It is necessary that research is conducted in order to investigate how or if excessive episodic drinking alters between the years (Bewick et al., 2009.) As noted drinking alcohol harbours many adverse consequences. Knowledge of the particular drinking motives across an academic course may aid in the development of effective preventative policies and programs that can be instilled within that year of study.

Therefore, the main aim of this present study is to gain knowledge of the drinking trends across academic years (Royal College of Psychiatrists, 2000; Kypri et al., 2004). After understanding the typology of college drinking, different interventions will be discussed later on in the study. The present study will also investigate the relationships between stress, drinking motives and hazardous alcohol consumption.

Using Cooper's (1994) drinking motives questionnaire-revised, allows one to determine which four motivational dimensions for drinking are most common amongst individuals. The motives investigated include social, enhancement, coping and conformity. Social and conformity motives may be more apparent in first year students (LaBrie et al., 2007), whilst coping is thought to be the most chosen amongst final year student as students in their last year experience higher stress due to workload (Alsaqri, 2017). Students in-between these years are presumably more interested in drinking for social and enhancement reasons as these motives, as mentioned in the introduction, are the most common drinking motives amongst students (Cooper et al., 2015; Crutzen, Kuntsche, & Schelleman-Offermans, 2013; Kuntsche et al., 2005).

These aims produce the following research questions and hypothesis:

Research question 1: Which drinking motives (i.e., enhancement, coping, social, conformity) are most strongly associated with hazardous drinking? Hypothesis for research question 1: Enhancement and social reasons will be the most commonly chosen motivations for hazardous alcohol consumption.

Research question 2: How do different drinking motives relate to stress? Hypothesis for research question 2: In line with previous research, coping motives will have a strong positive correlation with high stress scores.

Research question 3: Is there a relationship between academic year and different drinking motives? Hypothesis for research question 3: Students in between first and final year drink for Social and Enhancement reasons more than students in first and final year do. Second hypothesis for question 3: Students in first year drink for Social and Conformity more so than any other year. Final hypothesis for question 3: Students in their final year drink due to coping reasons more than earlier years.



## **Methods**

### **Participants**

The current study recruited a sample of 89 (Females:  $n = 48$ ; Males:  $n = 39$ ; Other:  $n = 2$ ) participants with a mean age of 21.36 years (First year: 19.44 years; In-between first and final years: 21.14 years; Final year: 22.53 years) ( $SD = 2.18$ ) ranging from 18 to 27 years. Of the participants recruited; 18 were first year students, 35 were in-between first and final years and 36 were in their final year of college.

The initial sample of participants consisted of 126, of which 37 individuals were excluded from participating in the study, as they did not meet the criteria. Since the current study aimed to examine relationships between the drinking motivations of students across the academic year, participants needed to attend college or university, consume alcohol and considering ethics, participants needed to be 18 years old or over to participate.

The participants were recruited through a non-probability, snowball sampling technique. A link to the survey was distributed through the researcher's social media accounts (Instagram, Facebook and Snapchat). Following the completion of the survey, participants were asked to share the link with their peers if they knew anyone eligible to partake in the study.

### **Measures**

#### ***Demographics***

The following studies' survey included the use of demographic questions accompanied by three distinct research instruments, measuring alcohol consumption, self-perceived stress and drinking motives. The survey was created using Microsoft Forms, an online survey creator. Demographic questions including age, gender (female, male and other) and specifications regarding the stage in their college course (First years, In-between-first and

final year and Final year) aimed to gain an understanding of the general profile of the students participating in the study (Appendix 1).

### ***Hazardous Alcohol Consumption***

The Alcohol Use Disorders Identification Test – Concise. (AUDIT-C): ( $\alpha = 0.51$ ) developed by the World Health Organization (1998) is used as an alcohol screening instrument that can determine individuals that are heavy episodic or hazardous drinkers. The AUDIT-C is a modified version of the 10 question AUDIT measure.

The AUDIT-C consists of the first 3 questions of AUDIT and are scored on a scale from 0 to 12. Each AUDIT-C question comprises of 5 answer choices that have a value from 0 to 4 points. A score of 4 or more in males and 3 or more in females is considered to be positive and suitable result to suggest heavy episodic drinking or active alcohol use disorders. An example of a question is as follows: *How many units of alcohol do you drink on a typical day when your drinking?* The Cronbach's alpha in this study for this scale was ( $\alpha = .72$ ), this indicates an acceptable level of internal consistency with the current sample. See Appendix 2 for further detail.

### ***Stress***

Self-Perceived Stress Scale. (PSS-10's internal consistency was  $>.70$  in 11 of 12 studies analysed) (Lee, 2012). PSS-10 consists of 10-items developed by Cohen (1983), that's used to assess stress levels in young individuals, aged 12 or above. It measures the degree to which scenarios in an individuals' life are considered stress-inducing. It evaluates the unpredictability, unmanageability and how over-whelmed one's life may be. The PSS-10 contains four positively stated item (items 4, 5, 7 and 8) that need to be a reversed (e.g. of the reversal of the items: 0 = 4, 1 = 3, 2 = 2, 3 = 1 & 4 = 0). The following 6 items may be used as the values that they are and subsequently all 10 items are then calculated. Higher scores

normally demonstrate higher levels of perceived stress. The questions enquire about the individuals' thoughts and feelings throughout the last month, by using a 5-point scale from 'never' to 'very often'. The internal consistency of this scale in the present study was good ( $\alpha=.85$ ) (Appendix 3)

### ***Drinking Motives***

Drinking motives were measured using Cooper's (1994) four-factor Drinking Motives Questionnaire - Revised (DMQ-R), based on Cox and Klinger's (1990) conceptual model. The DMQ-R consists of 20-items scored on a 5-point Likert scale, ranging from 1 (never) to 5 (always). This questionnaire determines the regularity of drinking dependent on four conceptual and empirical unique motivational dimensions. These motivational dimensions consist of Enhancement ( $\alpha = .79$ ) (e.g., "Because it's fun"), Coping ( $\alpha= .83$ ) (e.g., "To forget your worries"), Conformity ( $\alpha= .84$ ) (e.g., "Because your friends pressure you to drink"), and Social ( $\alpha=.78$ )(e.g., "Because it helps you enjoy a party"). As seen all dimensions had good reliability in the current study. Previous studies reported a Cronbach's alpha of .70 or higher (Mezquita, et al., 2016). Each dimension consists of five items. Scale scores are calculated as the sum of respective items. No items are reverse scored. See Appendix 4 for more detail.

### **Design and Analysis**

The research design of the current study employed a quantitative approach using a cross-sectional research design. To investigate the first and second hypotheses, a correlation analysis was used, with the predictor variables being self-perceived stress, hazardous drinking and the criterion variables being drinking motives. A between-participants design was used to analyse the third research question. The predictor variables were those of

academic year and drinking motives were individually used as criterion variables for the four analyses conducted.

### **Procedure**

Participants were recruited through the researcher's social media platforms. The questionnaire was uploaded to Instagram, Facebook and Snapchat. Data was collected using Microsoft Forms. Once participants opened the link to the survey, they were provided with an information sheet, which explained the basis of the study and what participation would entail (see appendix 5). Participants were then provided with the consent form, where they had to provide their informed consent to participate in this study before they were allowed to continue on with the survey (see appendix 6). The consent form stated that participants were able to withdraw from the study at any stage in the survey.

This study incorporated branching questions to test the eligibility of participants. If participants clicked 'no' to any of the three-branching questions, they were sent to the end of the survey, without being allowed to answer the survey questions, as they did not meet the criteria to participate (see appendix 7).

Participation was estimated to take between 10 to 15 minutes to complete, but was noticed that on average participants completed the survey within 9 minutes. The questionnaire contained 4 sections. The first section consisted of the demographics, where three questions were asked to understand the participants general profile, these questions included, age, gender and academic year. The second section contained the Alcohol Use Disorders Identification Test – Concise (AUDIT-C; World Health Organisation, 1998) which was a modified scale containing three questions, analysing alcohol consumption and high-episodic drinking. The third section consisted of the Perceived-stress scale (PSS-10; Cohen, 1983) this was utilized to analyse the participants level of stress. The fourth section consisted of the 20 question, Drinking Motives Questionnaire-Revised (DMQ-R; Cox &

Klinger, 1990) analysing the four motivational dimensions of alcohol consumption, which included social, enhancement, coping and conformity questions. After the completion and submission of the current study, participants were provided with a debriefing form, where helpline numbers and my supervisors and my own contact details were provided (see Appendix 8 for full details).

The present study was approved by the National College of Ireland's Ethics Committee and is in accordance with The Psychological Society of Ireland Code of Professional Ethics (2010) and the NCI Ethical Guidelines and Procedures for Research involving Human Participants.

## Results

### Descriptive Statistics

The current data is taken from a sample of 89 participants ( $n = 89$ ). This consisted of 53.9% females ( $n = 48$ ), 43.8% males ( $n = 39$ ) and 2.2% others ( $n = 2$ ). From this sample 21.3% ( $n = 19$ ) are currently in their first year of college course, 38.2% ( $n = 34$ ) are in-between first and final year and 40.4% ( $n = 36$ ) are in their final year of education.

Descriptive statistics for demographic variables are presented below in Table 1 for gender and academic year.

Table 1

*Frequencies for the current sample of gender and academic year on each demographic variable ( $N = 89$ )*

Variable	Frequency	Valid %
<b>Academic Year</b>		
1 <sup>st</sup> Year	19	21.3

In-between		34	38.2
Final Year		36	40.4
<b>Gender</b>			
1 <sup>st</sup> Year	Female	9	47.37
	Male	8	42.1
	Other	2	10.5
In-between	Female	18	52.9
	Male	16	47.1
Final Year	Female	21	
	Male	15	58.3
			41.7

Descriptive statistics on continuous variables were performed, including alcohol dependency, perceived stress, drinking motives and age. The means (M), standard deviation (SD), Medians (MD) and range were obtained and are displayed below in Table 2.

Table 2

*Descriptive statistics for all continuous variables, (N = 89)*

Variable	M [95% CI]	Std.Error	Median	SD	Range
Mean					
Harmful Alcohol Use	4.73 (4.21 - 5.24)	.26	5	2.43	8
Perceived Stress	20.23 (18.69 – 21.76)	.77	20	7.28	37
DMQ-R subscales					
1.Social motives					

2.Enhancement motives	16.64 (15.87 – 17.41)	.39	18	3.65	15
3.Conformity motives					
4.Coping motives	14.52 (13.67 – 15.36)	.43	15	4.03	15
	8.57 (7.73 – 9.42)	.42	7	4	15
	10.74 (9.83 – 11.66)	.46	10	4.34	15
Age	21.36 (20.90 – 21.82)	.23	21	2.18	12

Preliminary analysis was performed to assess the normality of the continuous variables. Kolmogorov-Smirnov normality test resulted in a statistically significant result ( $p < .05$ ) for each continuous variable. Inspection of the histograms showed that the data was positively skewed. Transforming the data did not eliminate the skewness, therefore, were not applied. Considering that the data violated the assumption of normal distribution, non-parametric statistics were used.

### **Inferential Statistics**

To investigate the relationship between the scores for the subscale of drinking motives (ie, SOC, ENH, CON and COP) and hazardous drinking, a spearman's correlation was executed. There was a weak, positive correlation between social motives and hazardous drinking ( $r_s(89) = .167, p < .118$ ). Enhancement motives showed a moderate, positive correlation with hazardous drinking ( $r_s(89) = .350, p < 0.001$ ). Conformity motives had very weak or no negative correlation ( $r_s(89) = -0.010, p < 0.923$ ). Coping motives had a weak, positive correlation to hazardous drinking ( $r_s(89) = .197, p < .065$ )

A spearman's correlation was used to investigate the association between the aforementioned drinking motives and self-perceived stress. Social and Conformity motives

had a very weak, positive correlation with stress ( $r_s(89) = .183, p < .086$ ) ( $r_s(89) = .079, p < .461$ ) respectively. Coping motives had a strong, positive correlation with stress ( $r_s(89) = .508, p < .001$ ) whilst, Enhancement had a weak, positive correlation with stress ( $r_s(89) = .250, p < .018$ ) (visit appendix 9, for table)

4 Independent Samples Kruskal-Wallis tests were used to determine whether there is a significant difference in the drinking motives, in non-normally distributed data, for between groups. This test revealed no statistically significant differences between the three different academic year groups and social motives  $\chi^2(2, n = 89) = 4.06, p = .131$ , coping motives,  $\chi^2(2, n = 89) = 1.818, p = .403$ , enhancement motive,  $\chi^2(2, n = 89) = 5.695, p = .058$  and for conforming motives  $\chi^2(2, n = 89) = .985, p = .611$ .



## Discussion

The aim of the present study was to enhance the current knowledge surrounding drinking behaviours amongst college students, specifically exploring students' drinking motivations and stress across the undergraduate study. The present study examined three research questions.

The first research question hypothesised that enhancement and social reasons will be the most commonly chosen motivations for harmful alcohol consumption. Analysis of which drinking motives are most strongly associated with hazardous drinking was also looked into. This was explored by using a spearman's correlation analysis; from this it was found that, social, enhancement and coping motives had positive relationships with hazardous drinking. Enhancement motives had the strongest relationship, whilst conformity had a weak or no relationship to hazardous drinking. This is consistent with Previous studies that found high correlations between students reporting enhancement motives for hazardous drinking (Nehlin, C., & Öster, C. (2019) (Harbke CR, Laurent J, Catanzaro SJ) and social motives (Harbke CR, Laurent J, Catanzaro SJ)( Crutzen R, Kuntsche E)( Sun L, Windle M, Thompson NJ.). Positive affect motivations are therefore seen to be the best predictors of HED and hazardous consumption. Drinking to enhance one's opinion of themselves, or to "to get high" is a major predictor of alcohol dependency. Research suggests that endorphins get released in individual's brains when they consume alcohol; these are the "feel good" chemicals (Verebey, & Blum, 1979) Since individuals like the feelings that alcohol instils, therefore they will continue to drink to acquire these feelings because the greater something feels, the more likely someone is going to continue to do it. This is where alcohol dependency might start.

Secondly, it was hypothesised that stronger conformity drinking motives were associated with higher levels of stress. As found in Conn, Ejese & Foster's (2017) study, that

students were more likely to engage in heavy episodic and harmful drinking due to conformity as they sought validation and inclusion from their peers. Employing spearman's correlation analysis the most significant drinking motive was found to be coping motives, ( $r_s(89) = .508, p < .001$ ), with strong, positive relationships between the two variables. Conn, Ejesi & Foster's (2017) suggested that drinking because of coping reasons or "fitting in" with peers potentially can be explained by mechanisms for regulating stress as students may engage in problematic alcohol use in order to comply to the expectations of their peers, which is one means of trying to acculturate or to fit in a new setting (Borsari et al., 2007).

Conformity, social and enhancement motives were discovered as having weak and positive relationships to stress scores. Therefore, the second hypothesis can be rejected as coping was the stronger of the four drinking motives as having significant positive relationships to stress, even though conformity did have a relationship to stress, that was weak, it wasn't the strongest of the four. As Lyvers and colleagues (2010) had suggested that students use alcohol as a coping mechanism to deal with stress, the results in this study can declare that coping reasons were the only motivations found, for hazardous drinking that showed a strong relationship. Other researchers suggest coping with negative emotional states as having the strongest associations with alcohol dependency and abuse (Cooper, Frone, Russell, & Mudar, 1995; McNally, Palfai, Levine, & Moore, 2003; Simons, Correia, & Carey, 2000; Windle & Windle, 1996).

The final and main research question looked into what relationships can be explained across the academic year and the drinking motives. Investigations of the three groups, first year, in-between the years and final year and their chosen drinking motives was analysed using the Kruskal Wallis test, as this was the non-parametric statistical analysis of the one-way anova between groups test. The Kruskal wallis test found that across the three groups and their motives, all reported a significance level of above 0.05. Therefore, concluding that

no sufficient evidence is present to suggest that there is a statistically significant difference between the median drinking motives across these three groups.

This may be explained by the uniqueness of individuals and that every individual has their own experience, regardless of the stage that they're in college. Uniqueness can be described as a person's distinctiveness regarding other people. This uniqueness of individuals can be displayed in a person's behaviours or perceptions. A person's personality trait may also be a major factor for drinking motives amongst different college years, as noted that knowledge of the relationships between personality and drinking motivations may aid in identifying young drinkers whose drinking motivations may foreshadow the development of HED or alcohol dependency (Stewart, & Devine, 2000).

As mentioned in the results section, data was attempted to be transformed using  $\log_{10}$ , which still continued to show non-normal distributions across the sample. Square-root transformation was then attempted, afterwards, the two-step transformation or box-cox transformation was used. These aforementioned transformations did not change the skewness; therefore, the data was kept and non-parametric statistical analysis was decided to be the best fit.

### **Practical Implications**

Implications of this study might be regarded in the perspective of how third-level educational institutions can better serve their students. Findings obtained within the current study shows that continuous research regarding hazardous alcohol use amongst college students and coping motivations must continue, perhaps with a focus on personality traits. As this research found that coping is the main drinking motive amongst students who engage in hazardous drinking, perhaps learning about the personality traits of the individuals. As differing academic years and their drinking motives didn't show significant explanation to heavy episodic drinking.

Since the sum of moderate and high-risk alcohol abuse and its related health risk was at 79.8 percent in the current study. Interventions that attempt to influence students' views of harmful alcohol behaviours are useful in reducing the number of students who engage in dangerous alcohol behaviours. Third-level institutions may intervene by sending emails to all students on campus regarding the negative effects of alcohol use and perhaps in the emails, a list contact details of helplines and on-campus support services may be included.

The introduction of positive coping behaviours as a form of coping mechanisms to stress or negative environments, instead of turning to alcohol use, may be a good intervention to use. Posters listing the different ways to cope positively may be posted to the entrance of lecture halls. These positive coping behaviours are as follows, immediate problem-solving, root-cause solving, benefit-finding and spiritual growth (Snyder, 1999).

These positive coping behaviours firstly seek to fix the problem, investigate the underlying cause, so that the problem doesn't happen again. Explanation of looking at the positives or good things amongst the negative and finding a path that turns the problem into a learning lesson (Snyder, 1999).

### **Strengths and Limitations**

The results of the current study should be considered in light of several important limitations. First and foremost, the sample size (n=89) was slightly small. This potentially might have had an impact on the statistical power of the results obtained. Voluntary bias also becomes a factor, as the main method of attaining the participants was through the researcher's social media accounts. This possibly failed to ensure that the sample obtained was representative of the population as participants may potentially be located around the same area as the researcher, skewing the results, this study relied exclusively on self-report measures which can be unreliable, as participants with social motivations choose socially

desirable answers. There's consistently a chance that participants may not be marking their answers correctly as they may not be able to assess themselves accurately or the wording of the question may confuse them.

Secondly, the present study utilized a cross-sectional design; the results do not infer causality. Future research should apply a longitudinal design as results may have greater validity as well as further accurate understanding of the underlying reasons as to why college students drink alcohol to harmful quantities. Individuals are unique as are the problems that they face on the daily basis. Therefore, a longitudinal study may a better fit to track individuals across their academic life with more accuracy of results. The inclusion of personality characteristics may also be beneficial in future studies.

The first strength of the following study is that it attempts to expand on previous research, as it aimed to explain the differences in the drinking motives across an academic timeline, with a look at stress levels. To the researcher's knowledge, previous studies excluded the variable academic years to examine if different years have an effect on the chosen drinking motives and stress. Secondly, the study had a balanced sample of gender. Additionally, the present study had an even distribution of academic years. Finally, the scales that were used, all had good internal reliability of ( $\alpha > .70$ ). An important note, is that previous research found reliability within self-report tests analysing drinking behaviours (Grant, et al., 1997).

### **Conclusion**

Overall, there is evidence from previous literature regarding drinking motives' association to hazardous alcohol consumption. The following study further substantiated previous researchers' findings that enhancement had the strongest relationship to hazardous drinking. Coping motives correlated with high levels of stress. Although the present study found no significant predictive utility of the different academic years of student's relationship to different drinking motives selected. Future studies may gain a new perspective by attempting to increase the sample size of the study to gain a more accurate and valid data set. As this study included 89 participants, future studies may look into gathering a sample size of 200 students, with evenly distributed groups, of first, in-between and final year students. Additionally, as stated that participants differ in personality and uniqueness, longitudinal research can aid in providing an accurate sense of participants motives, as their individuality may be analysed throughout the course of their education. Since the analysis will be investigating the same individual, trends can be measured, where increases or decreases in consumption as well as changes in the selected drinking motives may be investigated. Broader implications of the study are perhaps how tertiary educational institutions could adopt new interventions by providing information regarding the risks of HED. As mentioned, spreading positive coping mechanisms may be beneficial around the college through students email inboxes. Student Unions could provide sober-nights, where students don't drink and partake in events where alcohol is not used.

The reasons for consuming alcohol is a complex and ever-changing construct, that can be influenced by the environment, culture and own-personal deciding factors. Hence, it is important to continually update the knowledge surrounding students' alcohol behaviours, since the negative effects they may cause are detrimental to society, especially to college students.

## References

- Abbey, A., Smith, M. J., & Scott, R. O. (1993). The relationship between reasons for drinking alcohol and alcohol consumption: an interactional approach. *Addictive behaviors, 18*(6), 659–670. [https://doi.org/10.1016/0306-4603\(93\)90019-6](https://doi.org/10.1016/0306-4603(93)90019-6)
- Alsaqri, S. H. (2017). Stressors and Coping Strategies of the Saudi Nursing Students in the Clinical Training: A Cross-Sectional Study. *Education Research International, 2017*, 1–8. <https://doi.org/10.1155/2017/4018470>
- Baer, J. S., & Carney, M. M. (1993). Biases in the perceptions of the consequences of alcohol use among college students. *Journal of studies on alcohol, 54*(1), 54–60. <https://doi.org/10.15288/jsa.1993.54.54>
- Betancourt, J., Ríos, J. L., Pagán, I., Fabián, C., González, A. M., Cruz, S. Y., González, M. J., Rivera, W. T., & Palacios, C. (2013). Non-medical use of prescription drugs and its association with socio-demographic characteristics, dietary pattern, and perceived academic load and stress in college students in Puerto Rico. *Puerto Rico health sciences journal, 32*(2), 89–94.
- Bewick, B. M., Mulhern, B., Barkham, M., Trusler, K., Hill, A. J., & Stiles, W. B. (2008). Changes in undergraduate student alcohol consumption as they progress through university. *BMC public health, 8*, 163. <https://doi.org/10.1186/1471-2458-8-163>
- Bradley, J. R., Carman, R. S., & Petree, A. (1991). Expectations, alienation, and drinking motives among college men and women. *Journal of drug education, 21*(1), 27–33. <https://doi.org/10.2190/XWBW-YDPM-W0HA-CUYG>.
- Bradley, J. R., Carman, R. S., & Petree, A. (1992). Personal and social drinking motives, family drinking history, and problems associated with drinking in two university

samples. *Journal of drug education*, 22(3), 195–202. <https://doi.org/10.2190/LLQY-PFE6-484L-91L6>

Bullock, S. (2004) Alcohol, drugs and student lifestyle: A study of the attitudes, beliefs and use of alcohol and drugs among Swedish University Students. SoRAD—Research report No. 21. SoRAD Report Series, Stockholm.

Carey, K. B., & Correia, C. J. (1997). Drinking motives predict alcohol-related problems in college students. *Journal of studies on alcohol*, 58(1), 100–105. <https://doi.org/10.15288/jsa.1997.58.100>

Carpenter, K. M., & Hasin, D. S. (1998). Reasons for drinking alcohol: Relationships with DSM-IV alcohol diagnoses and alcohol consumption in a community sample. *Psychology of Addictive Behaviors*, 12(3), 168–184. <https://doi.org/10.1037/0893-164X.12.3.168>

Carpenter, K. M., & Hasin, D. S. (1999). Drinking to cope with negative affect and DSM-IV alcohol use disorders: a test of three alternative explanations. *Journal of studies on alcohol*, 60(5), 694–704. <https://doi.org/10.15288/jsa.1999.60.694>

Castellanos-Ryan, N., O'Leary-Barrett, M., Sully, L., & Conrod, P. (2013). Sensitivity and Specificity of a Brief Personality Screening Instrument in Predicting Future Substance Use, Emotional, and Behavioral Problems: 18-Month Predictive Validity of the Substance Use Risk Profile Scale. *Alcoholism: Clinical and Experimental Research*, 37, E281–E290. <https://doi.org/10.1111/J.1530-0277.2012.01931.X>

Conn, B. M., Ejese, K., & Foster, D. W. (2017). Acculturative stress as a moderator of the effect of drinking motives on alcohol use and problems among young adults. *Addictive behaviors*, 75, 85–94. <https://doi.org/10.1016/j.addbeh.2017.06.017>



- Cooper, M. L., Krull, J. L., Agocha, V. B., Flanagan, M. E., Orcutt, H. K., Grabe, S., Dermen, K. H., & Jackson, M. (2008). Motivational pathways to alcohol use and abuse among Black and White adolescents. *Journal of Abnormal Psychology, 117*(3), 485–501. <https://doi.org/10.1037/a0012592>
- Cooper, M. L., Kuntsche, E., Levitt, A., Barber, L. L., & Wolf, S. (2016). Motivational Models of Substance Use: A Review of Theory and Research on Motives for Using Alcohol, Marijuana, and Tobacco. In K. J. Sher (Ed.), *The Oxford Handbook of Substance Use and Substance Use Disorders* (Vol. 1, pp. 375-421). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199381678.013.017>
- Cooper, M. L., Frone, M. R., Russell, M., & Mudar, P. (1995). Drinking to regulate positive and negative emotions: A motivational model of alcohol use. *Journal of Personality and Social Psychology, 69*(5), 990–1005. <https://doi.org/10.1037/0022-3514.69.5.990>
- Cooper, M. L. (1994). Motivations for alcohol use among adolescents: Development and validation of a four-factor model. *Psychological Assessment, 6*(2), 117–128. <https://doi.org/10.1037/1040-3590.6.2.117>
- Cox, W. M., & Klinger, E. (1988). A motivational model of alcohol use. *Journal of Abnormal Psychology, 97*(2), 168–180. <https://doi.org/10.1037/0021-843X.97.2.168>
- Cox, W. M., & Klinger, E. (1990). Incentive motivation, affective change, and alcohol use: A model. In *Why people drink: Parameters of alcohol as a reinforcer*. Psychology Press.
- Crutzen, R., Kuntsche, E., & Schelleman-Offermans, K. (2013). Drinking motives and drinking behavior over time: A full cross-lagged panel study among adults. *Psychology of Addictive Behaviors, 27*(1), 197–201. <https://doi.org/10.1037/a0029824>

- Dawson, D. A., Grant, B. F., Stinson, F. S., & Chou, P. S. (2004). Another look at heavy episodic drinking and alcohol use disorders among college and noncollege youth. *Journal of studies on alcohol*, *65*(4), 477-488.
- Dehart, T., Tennen, H., Armeli, S., Todd, M., & Mohr, C. (2009). A Diary Study of Implicit Self-esteem, Interpersonal Interactions and Alcohol Consumption in College Students. *Journal of experimental social psychology*, *45*(4), 720–730.  
<https://doi.org/10.1016/j.jesp.2009.04.001>
- Delplanque, S., Silvert, L., Hot, P., Rigoulot, S., & Sequeira, H. (2006). Arousal and valence effects on event-related P3a and P3b during emotional categorization. *International journal of psychophysiology : official journal of the International Organization of Psychophysiology*, *60*(3), 315–322. <https://doi.org/10.1016/j.ijpsycho.2005.06.006>
- Digrande, L., Perrier, M. P., Lauro, M. G., & Contu, P. (2000). Alcohol use and correlates of binge drinking among university students on the Island of Sardinia, Italy. *Substance use & misuse*, *35*(10), 1471–1483. <https://doi.org/10.3109/10826080009148226>
- Dumitrescu A. L. (2007). Tobacco and alcohol use among Romanian dental and medical students: a cross-sectional questionnaire survey. *Oral health & preventive dentistry*, *5*(4), 279–284.
- Engels, R., Wiers, R. W. H. J., Lemmers, L., & Overbeek, G. (2005). Drinking motives, alcohol expectancies, self-efficacy, and drinking patterns. *Journal of Drug Education*, *35*(2), 147-166. <https://doi.org/10.2190/6Q6B-3LMA-VMVA-L312>
- Engs, R.C, Slawinska, J.B, Hanson, D.J.(1991) THE DRINKING PATTERNS OF AMERICAN AND POLISH UNIVERSITY STUDENTS: A CROSS-NATIONAL

STUDY. *Drug and Alcohol Dependence* Vol. 27(2), 167-175, March. Retrieved from IUScholarWorks Repository: <http://hdl.handle.net/2022/18411>

- Fromme, K., & Ruela, A. (1994). Mediators and moderators of young adults' drinking. *Addiction*, 89(1), 63–71. <https://doi.org/10.1111/j.1360-0443.1994.tb00850.x>
- Goldsmith, A. A., Tran, G. Q., Smith, J. P., & Howe, S. R. (2009). Alcohol expectancies and drinking motives in college drinkers: Mediating effects on the relationship between generalized anxiety and heavy drinking in negative-affect situations. *Addictive behaviors*, 34(6-7), 505–513. <https://doi.org/10.1016/j.addbeh.2009.01.003>
- Gordon, R., Heim, D., & MacAskill, S. (2012). Rethinking drinking cultures: A review of drinking cultures and a reconstructed dimensional approach. *Public Health*, 126(1), 3-11. <https://doi.org/10.1016/j.puhe.2011.09.014>
- Grant, K. A., Arciniega, L. T., Tonigan, J. S., Miller, W. R., & Meyers, R. J. (1997). Are reconstructed self-reports of drinking reliable? *Addiction*, 92(5), 601–606. <https://doi.org/10.1111/j.1360-0443.1997.tb02917.x>
- Granville-Chapman, J. E., Yu, K., & White, P. D. (2001). A follow-up survey of alcohol consumption and knowledge in medical students. *Alcohol and alcoholism (Oxford, Oxfordshire)*, 36(6), 540–543. <https://doi.org/10.1093/alcalc/36.6.540>
- Handley, E. D., & Chassin, L. (2009). Intergenerational transmission of alcohol expectancies in a high-risk sample. *Journal of studies on alcohol and drugs*, 70(5), 675–682. <https://doi.org/10.15288/jsad.2009.70.675>
- Harbke, C. R., Laurent, J., & Catanzaro, S. J. (2019). Comparison of the Original and Short Form Drinking Motives Questionnaire-Revised With High School and Underage

College Student Drinkers. *Assessment*, 26(7), 1179–1193.

<https://doi.org/10.1177/1073191117731812>

Herring, R., Berridge, V., & Thom, B. (2008). Binge drinking: an exploration of a confused concept. *Journal of epidemiology and community health*, 62(6), 476–479.

<https://doi.org/10.1136/jech.2006.056721>

Jerez, S. J., & Coviello, A. (1998). Alcohol drinking and blood pressure among adolescents. *Alcohol (Fayetteville, N.Y.)*, 16(1), 1–5. [https://doi.org/10.1016/s0741-8329\(97\)00152-3](https://doi.org/10.1016/s0741-8329(97)00152-3)

Kairouz, S., Gliksman, L., Demers, A., & Adlaf, E. M. (2002). For all these reasons, I do...drink: a multilevel analysis of contextual reasons for drinking among Canadian undergraduates. *Journal of Studies on Alcohol*, 63(5), 600–608.

<https://doi.org/10.15288/JSA.2002.63.600>

Karwacki, S. B., & Bradley, J. R. (1996). Coping, Drinking Motives, Goal Attainment Expectancies and Family Models in Relation to Alcohol Use among College Students. *Journal of Drug Education*, 26(3), 243–255. <https://doi.org/10.2190/A1P0-J36H-TLMJ-0L32>

Kassel, J. D., Jackson, S. I., & Unrod, M. (2000). Generalized expectancies for negative mood regulation and problem drinking among college students. *Journal of Studies on Alcohol*, 61(2), 332–340. <https://doi.org/10.15288/jsa.2000.61.332>

Kilmer, J. R., Cronce, J. M., & Larimer, M. E. (2014). College student drinking research from the 1940s to the future: where we have been and where we are going. *Journal of Studies on Alcohol and Drugs. Supplement*. <https://doi.org/10.15288/jsads.2014.75.26>

- Kuntsche, E., & Cooper, M. L. (2010). Drinking to have fun and to get drunk: motives as predictors of weekend drinking over and above usual drinking habits. *Drug and Alcohol Dependence, 110*(3), 259-62. <https://doi.org/10.1016/j.drugalcdep.2010.02.021>
- Kuntsche, E., Knibbe, R., Gmel, G., & Engels, R. (2005). Why do young people drink? A review of drinking motives. *Clinical psychology review, 25*(7), 841–861. <https://doi.org/10.1016/j.cpr.2005.06.002>
- Kypri, K., Saunders, J. B., Williams, S. M., McGee, R. O., Langley, J. D., Cashell-Smith, M. L., & Gallagher, S. J. (2004). Web-based screening and brief intervention for hazardous drinking: A double-blind randomized controlled trial. *Addiction, 99*(11), 1410–1417. <https://doi.org/10.1111/j.1360-0443.2004.00847.x>
- Kypri, K., Cronin, M. and Wright, C.S. (2005) Do University Students Drink More Hazardously than Their Non-Student Peers? *Addiction, 100*, 713-714. <http://dx.doi.org/10.1111/j.1360-0443.2005.01116.x>
- Kypri, K., Langley, J.D., McGee, R., Saunders, J.B. and Williams, S. (2002) High prevalence, persistent hazardous drinking among New Zealand tertiary students. *Alcohol and Alcoholism, 37*, 457-464. doi:10.1093/alcalc/37.5.457
- LaBrie, J. W., Hummer, J. F., & Pedersen, E. R. (2007). Reasons for drinking in the college student context: the differential role and risk of the social motivator. *Journal of studies on alcohol and drugs, 68*(3), 393–398. <https://doi.org/10.15288/jsad.2007.68.393>
- Lyvers, M., Hasking, P., Hani, R., Rhodes, M., & Trew, E. (2010). Drinking motives, drinking restraint and drinking behaviour among young adults. *Addictive Behaviors, 35*(2), 116 - 122. <https://doi.org/10.1016/j.addbeh.2009.09.011>

- MacLean, Michael & Lecci, Len. (2000). A comparison of models of drinking motives in a university sample. *Psychology of addictive behaviors : journal of the Society of Psychologists in Addictive Behaviors*. 14. 83-7. [10.1037//0893-164X.14.1.83](https://doi.org/10.1037//0893-164X.14.1.83).
- McCabe, S.E., Boyd, C.J., Couper, M.P., Crawford, S., & D'Arcy, H.J. (2002). Mode effects for collecting alcohol and other drug use data: Web and U.S. mail. *Journal of studies on alcohol*, 63 6, 755-61 .
- Merrill, J. E., & Read, J. P. (2010). Motivational pathways to unique types of alcohol consequences. *Psychology of Addictive Behaviors*, 24(4), 705–711. <https://doi.org/10.1037/a0020135>
- Montgomery, R. L., Benedicto, J. A., & Haemmerlie, F. M. (1993). Personal vs Social Motivations of Undergraduates for using Alcohol. *Psychological Reports*, 73(3\_part\_1), 960–962. <https://doi.org/10.1177/00332941930733pt135>
- O'Hare, T. (2001). The Drinking Context Scale: A confirmatory factor analysis. *Journal of Substance Abuse Treatment*, 20(2), 129–136. [https://doi.org/10.1016/S0740-5472\(00\)00158-6](https://doi.org/10.1016/S0740-5472(00)00158-6)
- Oksuz, Ergun & Malhan, Simten. (2005). Socioeconomic factors and health risk behaviors among university students in Turkey: Questionnaire study. *Croatian medical journal*. 46. 66-73.
- Park, C. L., Armeli, S., & Tennen, H. (2004). The daily stress and coping process and alcohol use among college students. *Journal of studies on alcohol*, 65(1), 126–135. <https://doi.org/10.15288/jsa.2004.65.126>.

- Paul, E.L. and Brier, S. (2001), Friendsickness in the Transition to College: Precollege Predictors and College Adjustment Correlates. *Journal of Counseling & Development*, 79: 77-89. <https://doi.org/10.1002/j.1556-6676.2001.tb01946.x>
- Presley, C. A., Meilman, P. W., & Leichliter, J. S. (2002). College factors that influence drinking. *Journal of Studies on Alcohol, supplement*, (14), 82-90.
- Ratliff, K. G., & Burkhart, B. R. (1984). Sex differences in motivations for and effects of drinking among college students. *Journal of Studies on Alcohol*, 45(1), 26–32. <https://doi.org/10.15288/jsa.1984.45.26>
- Read, J. P., Wood, M. D., Kahler, C. W., Maddock, J. E., & Palfai, T. P. (2003). Examining the role of drinking motives in college student alcohol use and problems. *Psychology of addictive behaviors : journal of the Society of Psychologists in Addictive Behaviors*, 17(1), 13–23. <https://doi.org/10.1037/0893-164x.17.1.13>
- Royal College of Psychiatrists. (2000). *Drugs: Dilemmas and choices*. RCPsych Publications.
- Schelleman-Offermans, K., Kuntsche, E., & Knibbe, R. A. (2011). Associations between drinking motives and changes in adolescents' alcohol consumption: a full cross-lagged panel study. *Addiction (Abingdon, England)*, 106(7), 1270–1278. <https://doi.org/10.1111/j.1360-0443.2011.03423.x>
- Scott, M. E., Wildsmith, E., Welti, K., Ryan, S., Schelar, E., & Steward-Streng, N. R. (2011). Risky Adolescent Sexual Behaviors and Reproductive Health in Young Adulthood. *Perspectives on Sexual and Reproductive Health*, 43(2), 110–118. <http://www.jstor.org/stable/23048869>

SEVİNÇ, S., & GİZİR, C. (2014). Factors Negatively Affecting University Adjustment from the Views of First-Year University Students: The Case of Mersin University. *Educational Sciences: Theory & Practice*.

<https://doi.org/10.12738/estp.2014.4.2081>.

Simons, J., Correia, C. J., & Carey, K. B. (2000). A comparison of motives for marijuana and alcohol use among experienced users. *Addictive behaviors*, 25(1), 153–160.

[https://doi.org/10.1016/s0306-4603\(98\)00104-x](https://doi.org/10.1016/s0306-4603(98)00104-x)

Snyder, C. R. (Ed.). (1999). *Coping: The psychology of what works*. Oxford University Press, USA.

Stewart, S. H., & Zeitlin, S. B. (1995). Anxiety sensitivity and alcohol use motives. *Journal of Anxiety disorders*, 9(3), 229-240.

Stewart, C., & Power, T. G. (2002). Identifying patterns of adolescent drinking: A tri-ethnic study. *Journal of Studies on Alcohol*, 63(2), 156–

168. <https://doi.org/10.15288/jsa.2002.63.156>

Stewart, S. H., Loughlin, H. L., & Rhyno, E. (2001). Internal drinking motives mediate personality domain—drinking relations in young adults. *Personality and individual differences*, 30(2), 271-286.

Suerken, C. K., Reboussin, B. A., Sutfin, E. L., Wagoner, K. G., Spangler, J., & Wolfson, M. (2014). Prevalence of marijuana use at college entry and risk factors for initiation during freshman year. *Addictive behaviors*, 39(1), 302-307

Sun, L., Windle, M., & Thompson, N. J. (2015). An Exploration of the Four-Factor Structure of the Drinking Motives Questionnaire-Revised Among Undergraduate Students in



China. *Substance use & misuse*, 50(12), 1590–1598.

<https://doi.org/10.3109/10826084.2015.1027924>

Tyssen, R., Vaglum, P., Aasland, O.G., Gronvold, N.T. and Ekeberg, O. (1998), Use of alcohol to cope with tension, and its relation to gender, years in medical school and hazardous drinking: a study of two nation-wide Norwegian samples of medical students. *Addiction*, 93: 1341-1349. <https://doi.org/10.1046/j.1360-0443.1998.93913415.x>

Underwood, B., & Fox, K. (2000). A survey of alcohol and drug use among UK based dental undergraduates. *British dental journal*, 189(6), 314-317.

Van Damme, J., Maes, L., Clays, E., Rosiers, J. F., Van Hal, G., & Hublet, A. (2013). Social motives for drinking in students should not be neglected in efforts to decrease problematic drinking. *HEALTH EDUCATION RESEARCH*, 28(4), 640–650. <https://doi.org/10.1093/her/cyt036>

WAJohnston, L. D., OMalley, P. M., & Bachman, J. G. (2004). Monitoring the Future national survey results on drug use, 1975-2000. Volume II: College Students and Adults Ages 19-40 (NIH Publication No. 014925). National Institute on Drug Abuse, Bethesda, MD Kim MM (2000) Impact of affective states and drinking motives on drinking behavior. *Dissertation Abstracts International: Section B: The Sciences and Engineering*, 60, 4892 Klein. <https://doi.org/10.3998/2027.42/146531>

Wechsler, H., Dowdall, G. W., Davenport, A., & Castillo, S. (1995). Correlates of college student binge drinking. *American journal of public health*, 85(7), 921–926. <https://doi.org/10.2105/ajph.85.7.921>

Welty, Leah & Harrison, Anna & Abram, Karen & Olson, Nichole & Aaby, David &

McCoy, Kathleen & Washburn, Jason & Teplin, Linda. (2016). Health Disparities in Drug- and Alcohol-Use Disorders: A 12-Year Longitudinal Study of Youths After Detention. *American journal of public health*. 106. e1-e9. 10.2105/AJPH.2015.303032.

White, A., & Hingson, R. (2013). The burden of alcohol use: excessive alcohol consumption and related consequences among college students. *Alcohol research : current reviews*, 35(2), 201–218.

Wicki, M., Kuntsche, E., & Gmel, G. (2010). Drinking at European universities? A review of students' alcohol use. *Addictive behaviors*, 35(11), 913–924.  
<https://doi.org/10.1016/j.addbeh.2010.06.015>

Windle, M., & Windle, R. C. (1996). Coping strategies, drinking motives, and stressful life events among middle adolescents: associations with emotional and behavioral problems and with academic functioning. *Journal of abnormal psychology*, 105(4), 551–560.  
<https://doi.org/10.1037//0021-843x.105.4.551>

## Appendices

### Appendix 1

#### *Demographics*

1) Gender

- Female  
 Male  
 Other

2) Age

Enter your answer

3) What stage are you currently at in College or University?

- First Year  
 In-between First and Final year  
 Final Year

### Appendix 2

#### **AUDIT-C Questions**

The following 3 questions are the shortened version of The AUDIT Questionnaire originally created by Saunders (1993), which tests alcohol consumption.

1) How often do you have a drink containing alcohol?

- Monthly or less  
 2 to 4 times a month  
 2 to 3 times a week  
 4 or more times a week

2) How many units of alcohol do you drink on a typical day when you are drinking?

- 1 unit - Single small shot of spirits (25ml)  
1.4 units- Alcopop (275ml)  
1.7 units - Bottle of lager/beer/cider (330ml)  
2.3 units - Standard glass of wine (175ml)  
2.4 units - Can of lager/beer/cider (440ml)  
3 units - Pint of Lager/Beer/Cider  
10 units - Bottle of Wine  
 0-2

- 3-4
- 5-6
- 7-9
- 10 or more

3) How often have you had 6 or more units if female, or 8 or more if male, on a single occasion in the last year?

- Less than monthly
- Monthly
- Weekly
- Daily or almost daily

### **Appendix 3**

#### **The Perceived Stress Scale (Cohen et al, 1983)**

The following scales will ask about your feelings and thoughts during the last month. In each case, you will be asked to indicate by clicking how often you felt or thought a certain way.

For each question choose from the following alternatives:

0 - never 1 - almost never 2 - sometimes 3 - fairly often 4 - very often

1. In the last month, how often have you been upset because of something that happened unexpectedly? \_\_\_\_\_
2. In the last month, how often have you felt that you were unable to control the important things in your life? \_\_\_\_\_
3. In the last month, how often have you felt nervous and stressed? \_\_\_\_\_
4. In the last month, how often have you felt confident about your ability to handle your personal problems? \_\_\_\_\_
5. In the last month, how often have you felt that things were going your way? \_\_\_\_\_
6. In the last month, how often have you found that you could not cope with all the things that you had to do? \_\_\_\_\_
7. In the last month, how often have you been able to control irritations in your life?  
\_\_\_\_\_
8. In the last month, how often have you felt that you were on top of things? \_\_\_\_\_
9. In the last month, how often have you been angered because of things that happened that were outside of your control? \_\_\_\_\_

10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

#### **Appendix 4**

##### **Drinking Motives Questionnaire-Revised (Kuntsche et al., 2006)**

The Drinking Motives Questionnaire-Revised (DMQR) contains 20 reasons why people might be motivated to drink alcoholic beverages.

##### How often do you drink...

- To forget your worries.
- Because your friends pressure you to drink.
- Because it helps you enjoy a party.
- Because it helps you when you feel depressed or nervous.
- To be sociable.
- To cheer up when you are in a bad mood.
- Because you like the feeling.
- So that others won't kid you about not drinking
- Because it's exciting.
- To get high.
- Because it makes social gatherings more fun.
- To fit in with a group you like.
- Because it gives you a pleasant feeling.
- Because it improves parties and celebrations.
- Because you feel more self-confident and surer of yourself.
- To celebrate a special occasion with friends.
- To forget about your problems.
- Because it's fun.
- To be liked.
- So you won't feel left out.

##### scale: frequency

- almost never/never
- some of the time
- half of the time
- most of the time

- almost always/always

## **Appendix 5**

### **Information on the Present Study**

I would like to invite you to take part in this online questionnaire. The present study aims to explore which of the four drinking motives, which include, social, coping, conformity and enhancement, are most prevalent amongst college students and whether there is a difference between the drinking motives of students in various stages of their degrees.

This research project is being conducted by Naomi Kiss, an undergraduate psychology student at National College of Ireland. The method proposed for this research project has been approved in principle by the Departmental Ethics Committee. The data from all participants will be compiled, analysed, and submitted in a report for my final year thesis to the Psychology Department in the School of Business. Please read this form in its entirety before you agree to partake in this study.

### **Specific Criteria for Participation:**

This study requires ONLY participants that are 18 years or older and are currently enrolled in a tertiary education, i.e. College or University. The aim of this study is to look into alcohol use amongst college students therefore, the aim is to recruit only students that consume alcohol.

In this study, you will be asked some brief demographic questions relating to age, gender and college year. This will then be followed by The Alcohol Use Disorders Identification Test, Self-Perceived Stress scale and then The Drinking Motives Questionnaire-Revised. If you agree to partake in the 'DRINKING MOTIVES: THE RELATIONSHIPS BETWEEN SELF-PERCEIVED STRESS AND ALCOHOL CONSUMPTION AMONGST COLLEGE STUDENTS' study, a total of 36 questions will be asked, that will take 5-10 minutes to complete.

### **Will taking part be Confidential?**

All information that is provided will remain confidential and data collected will be anonymous. No identifiable data will be collected i.e name, email etc. The collected information will be statistically analysed and will be averaged, therefore making this study more confidential.

### **Benefits of Participating**

Your responses may help us learn more about the current drinking motives of college students. Understanding these motives may aid in future research on what intervention methods to introduce to help lower alcohol consumption rates and prevent alcohol-related health risks. Additionally, you would be helping a final year student complete her thesis.

### **The Possible Risks**

There are no foreseeable risks involved in participation. However, if throughout this questionnaire you wish to not proceed for any given reason, you may withdraw from the questionnaire without penalty. As mentioned above, the following questionnaire is completely anonymous and treated confidentially, therefore I will not know who withdrew. If you feel distress as a consequence of partaking in this questionnaire and wish to seek help a list of contact details for support services is included at the end of questionnaire, in the debriefing section.

## **Appendix 6**

### **Consent Form**

- I understand that I am able to withdraw before or during the study without it affecting me
- I am **unable to withdraw my data after submission**, as the data collected is anonymised and therefore, there is no possibility of finding out which data is mine
- I have had the purpose and nature of the study explained to me within the Information sheet, in writing
- I am aware that any questions I may have relating to the study, I am able to email the researcher at [x18438344@student.ncirl.ie](mailto:x18438344@student.ncirl.ie) and have those questions answered
- I understand that participation involves the completion of a 5 to 10 minute questionnaire which will consist of four sections regarding demographics, stress levels (Cohen et al, 1983), alcohol consumption (World Health Organization, 2019) and reasons for drinking (Kuntsche et al., 2006).

By clicking the “I agree” button below I confirm that I have read the above information and agree to consent to participate.

I agree

## Appendix 7

### Eligibility to participate questions

I am 18 years or older

Yes

No

I consume alcohol

Yes

No

I am currently a college or university student

Yes

No

## Appendix 8

### Debriefing Form

Thank you for participating as a research participant in the present study regarding your drinking motives, alcohol intake and stress levels. As mentioned, the following study aims to understand the effects that stress has on the reasons for alcohol consumption and alcohol levels. An overlook of whether different stages in your degree can impact drinking motives is also investigated.

You were asked to complete a questionnaire consisting of three sections. The first section included questions relating to Alcohol Consumption, using the AUDIT Questionnaire. The following section analysed the reasons for drinking, by using The Drinking Motives Questionnaire-Revised. The final section analysed stress levels by the use of The Self-Perceived Stress Scale.

Again, I thank you for your participation and if you know any friends or acquaintances that are eligible to participate in this study, please forward this link.

In the event that you feel psychologically distressed by participation in this study, or were triggered by the topics covered in the survey questions, I encourage you to call any of the following support service numbers:

Samaritans

Telephone: 116 123

Email: [www.dublinsamaritans.ie](http://www.dublinsamaritans.ie)

24 Hours helpline. Drop in centre at 112 Marlboro Street, Dublin 1 from 10am to 10pm.



HSE DRUGS & ALCOHOL HELPLINE

Freephone: 1800 459 459

Email: [helpline@hse.ie](mailto:helpline@hse.ie)Aware Support Line

Freephone: 1800 80 48 48

Monday to Sunday 10am-10pm

Name of researcher: Naomi KissEmail: [x18438344@student.ncirl.ie](mailto:x18438344@student.ncirl.ie)Research Supervisor: Dr. Fearghal O'BrienEmail: [fearghal.obrien@ncirl.ie](mailto:fearghal.obrien@ncirl.ie)**Appendix 9**

Table 3.

*Spearman's Rank- Order Correlations Between Drinking Motives, Stress and Hazardous Drinking*

	1.	2.
<b>1.HED</b>	--	--
<b>2.PSS</b>		
<b>3. Social Motives</b>	0.16	0.18
<b>4. Enhancement Motives</b>	0.35	0.25
<b>5. Conformity Motives</b>	-0.01	0.79
<b>6. Coping Motives</b>	0.19	0.50

Note. N = 89.

HED= heavy episodic/harmful alcohol consumption

PSS=Perceived stress scores

**Appendix 10**

Evidence of data and SPSS output (full data file available upon request)

ACTUAL SPSS.SAV [Dataset 1] - IBM SPSS STATISTICS DATA EDITOR

File Edit View Data Transform Analyze Graphs Utilities Extensions Window Help

	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
1	ID	Numeric	8	2		None	None	11	Right	Scale	Input
2	Gender	Numeric	11	0		{0, Female}...	None	11	Right	Nominal	Input
3	Age	Numeric	2	0		None	None	7	Right	Scale	Input
4	AcademicY...	Numeric	11	0	Academic Year	{1, First Ye...	None	11	Right	Nominal	Input
5	AUDITC1	Numeric	11	0	Drinking Freque...	{0, Monthly ...	None	11	Right	Nominal	Input
6	AUDITC2	Numeric	1	0	Units Single Sit...	{0, 0 to 2}...	None	9	Right	Nominal	Input
7	AUDITC3	Numeric	11	0	Binge Drinking	{0, Less tha...	None	11	Right	Nominal	Input
8	PSS1	Numeric	11	0	Been Upset	{0, Never}...	None	11	Right	Nominal	Input
9	PSS2	Numeric	11	0	Unable to Control	{0, Never}...	None	11	Right	Nominal	Input
10	PSS3	Numeric	11	0	Nervous & Stre...	{0, Never}...	None	11	Right	Nominal	Input
11	PSS4	Numeric	11	0	Confident to ha...	{0, Never}...	None	11	Right	Nominal	Input
12	PSS5	Numeric	11	0	Things going yo...	{0, Never}...	None	11	Right	Nominal	Input
13	PSS6	Numeric	11	0	Could not cope	{0, Never}...	None	11	Right	Nominal	Input
14	PSS7	Numeric	11	0	Control Irritations	{0, Never}...	None	11	Right	Nominal	Input
15	PSS8	Numeric	11	0	Ontop of things	{0, Never}...	None	11	Right	Nominal	Input
16	PSS9	Numeric	11	0	Been Angered	{0, Never}...	None	11	Right	Nominal	Input
17	PSS10	Numeric	11	0	Difficulties Pilin...	{0, Never}...	None	11	Right	Nominal	Input
18	DMQR1	Numeric	11	0	Others wont kid...	{1, Almost n...	None	11	Right	Nominal	Input
19	DMQR2	Numeric	11	0	Pleasant feeling	{1, Almost n...	None	11	Right	Nominal	Input
20	DMQR3	Numeric	11	0	To be Sociable	{1, Almost n...	None	11	Right	Nominal	Input
21	DMQR4	Numeric	11	0	Its fun	{1, Almost n...	None	11	Right	Nominal	Input
22	DMQR5	Numeric	11	0	Wont feel exclu...	{1, Almost n...	None	11	Right	Nominal	Input
23	DMQR6	Numeric	11	0	Feel more self...	{1, Almost n...	None	11	Right	Nominal	Input
24	DMQR7	Numeric	11	0	Enjoy a party	{1, Almost n...	None	11	Right	Nominal	Input
25	DMQR8	Numeric	11	0	To be liked	{1, Almost n...	None	11	Right	Nominal	Input
26	DMQR9	Numeric	11	0	Celebrate speci...	{1, Almost n...	None	11	Right	Nominal	Input
27	DMQR10	Numeric	11	0	Get high	{1, Almost n...	None	11	Right	Nominal	Input
28	DMQR11	Numeric	11	0	Forget problems	{1, Almost n...	None	11	Right	Nominal	Input
29	DMQR12	Numeric	11	0	Cheer up when ...	{1, Almost n...	None	11	Right	Nominal	Input

Data View **Variable View**

